

THE CASE FOR MANAGEMENT REFORM
IN THE SCOTIA-FUNDY GROUND FISHERY

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1. Introduction

The management of the Atlantic groundfish is dramatically inadequate as demonstrated by the constant state of crisis over dwindling groundfish quotas and highlighted by the recent plant closures.

Everyone involved with the industry would agree with the principle of "conservation and restoration of the fisheries resource" as stated at the top of the list of basic principles contained in the annual Groundfish Management Plan. A serious problem arises because the current management regime is not capable of achieving this objective. Our fisheries resources are not being properly conserved or restored. There is a serious and growing imbalance between harvesting capacity and estimates of resource availability.

Why has this happened when conservation oriented objectives have been so vigorously promoted by government and industry for over a decade?

This report gives some reasons why the present regime has failed and, more importantly, offers some recommendations for management reform.

II. The Current Management Regime

Since the late 1970's the mainstay for the management of the Atlantic groundfishery has been quotas and limited entry. At the time, establishing quotas for each species was seen as the key to restoration of overfished stocks and a stable sustainable resource base for the future. In fact, the newly emerging Law of the Sea, the basis for extension of Canadian fisheries jurisdiction to 200nm, required the coastal state to set TAC's in order to determine the availability of resources for others.

The scientific, administrative and enforcement commitment required to achieve this level of management has been significant. DFO has invested a huge amount of money and effort to establish a consultative network that is unsurpassed in its coverage.

The regulatory framework that has evolved along with the management regime is one of the most complex in the world. When combined with the myriad of associated policies it represents an administrative quagmire of unprecedented proportions.

A fundamental problem is that the entire system has focused on establishing, allocating and enforcing quotas but not on managing the fisheries. Over 85% of the scientific research effort is devoted to generating TAC's, leaving little or no time for research into further understanding what actually makes our fisheries tick.

Preoccupation with quotas has led to the creation of an entire division within DFO whose function is to allocate resources but not to manage fisheries. There is no division dedicated to management of the fisheries.

Misreporting and highgrading of catches has seriously reduced the usefulness of commercial catch data to the assessment process.

Obsession with quota management has left the fishing industry free to decimate inshore spawning subgroups and juvenile aggregations, to the point where there is little left for the nearshore fixed gear fishermen, thereby forcing them to go farther and invest more capital to catch their fish.

Obsession with quota management to the point where there is almost a complete unwillingness to address in other ways the problems of overfishing transboundary stocks, has left Canada with little or no effective management on Georges Bank or on the nose and tail of the Grand Banks.

An effective mechanism to control the harvesting capacity of the groundfish fleet is an essential component of quota management. Harvesting capacity can involve the number of boats and also the fishing capability of these boats. Limited entry has not been particularly effective since so many licences were issued and they are readily available for transfer. Vessel replacement has not limited carrying capacity or fishing power. The fleet must be matched to the available quota which often does not equate to the "catchability" of the resource. If there are more boats than required to take the quota (which is certainly the case in Scotia-Fundy), then we are left with a system in which those who misreport enjoy an unfair share of benefits.

It was evident early on that the length restriction on vessel replacements was not working as a capacity control mechanism. The associated policy limiting the increase in fish hold capacity was never enforced. Something constructive should have been done to sensibly resolve the problem. This was not done. There was some hope in the new licencing policy but unfortunately DFO has adopted a vessel replacement policy which again fails to achieve the objective.

In the past few years, DFO has recognized some of the problems. Misreporting, once denied as a serious problem, is now a priority within the department. The introduction of minimum size regulations (although the wrong size was chosen and there was no enforcement), a research program into selective gear technology and the successful use of a closed haddock nursery ground on Western Bank are all encouraging initiatives.

What is really needed however, is a complete revision of the groundfish management system. This will not be easily achieved. Many careers within DFO have been built on the present regime and there is a firmly entrenched reluctance to imply failure by advocating reform.

III. Conclusions and Objectives

The following conclusions flow from the preceding discussion and the lessons of two decades of fisheries management experience.

Conclusions

1. Stock abundance is primarily a function of recruitment - an unpredictable and widely fluctuating phenomenon.
2. Neither commercial catch rates nor random surveys can provide a consistent estimate of stock abundance when concentrations of fish vary seasonally.
3. Vessel, trip and company quotas all provide strong incentives to dump, discard, highgrade and misreport. Poor catch data yields poor assessments.
4. It is impossible to effectively control these destructive and wasteful activities without having an enforcement officer on every boat which is unreasonable to expect.
5. An effective management regime should focus on the age distribution and number of fish killed rather than the weight of the fish landed.
6. The fishing industry possesses a great deal of information about the resource and an increasingly sophisticated monitoring capability that has the potential to be an important source of routine biological information. Also, DFO possesses a wealth of observer program data that is not being effectively utilized.
7. The key to improving both the prescriptive and predictive capability of stock assessments involves understanding the factors controlling natural

variability. Scientists are spending most of their time manipulating statistics to generate TAC's rather than studying the biology of the fishery.

8. Incentives are a much more effective method of controlling behaviour than restrictive, unenforceable and antagonistic initiatives.
9. It is socially, economically and politically unacceptable to completely close down the inshore groundfishery.

Objectives

The Kirby Task Force set out the objectives of Atlantic fisheries policy. In order of priority they are:

- Objective 1: The Atlantic Fishing industry should be economically viable on an ongoing basis, where to be viable implies an ability to survive downturns with only a normal business failure rate and without government assistance.
- Objective 2: Employment in the Atlantic fishing industry should be maximized subject to the constraint that those employed receive a reasonable income as a result of fishery-related activities, including fishery-related income transfer payments.
- Objective 3: Fish within the 200-mile Canadian zone should be harvested and processed by Canadian firms owned by Canadians wherever this is consistent with Objectives 1 and 2 and with Canada's international treaty obligations.

Attaining these objectives depends on the implementation of an effective management plan for the Atlantic Groundfishery. What are the essential elements of such a plan? The answer to this question will provide a yardstick against which the reform proposals can be evaluated.

1. Resource Conservation

The management plan at least must ensure that each stock is maintained with a spawning stock biomass large enough to be able to respond to a favourable recruitment climate.

Ideally, the regime should be able to direct fishing effort in such a way that the industry gets the highest yield per recruit. This implies the ability to maintain a balance between harvesting capacity and the

available resources.

The present regime falls short of both these objectives. Neither protection of spawning stocks nor pre-recruit biomasses is a priority and there is already a serious harvesting overcapacity problem.

2. Cost Effectiveness

The management regime must be cost effective in that the amount of money spent on the system must be worthwhile in terms of return on investment. Within the existing regime administrative costs approach the landed value of the resource, therefore the regime is clearly not cost effective.

3. Enforceability

It is essential that the regime be enforceable. We must accept that it is impossible to have a policeman on every wharf, or on every boat, so the regime must minimize incentives and maximize deterrence to violating good practices. The current system does not accomplish this objective.

4. Industry Support and Involvement

The regime must have a broad base of support from industry. Therefore DFO must take some serious steps to improve its credibility in the eyes of fishermen and the industry must be given the opportunity to participate in all aspects of Fisheries management, not just during brief consultations.

Rigid adherence to rules that force fishermen to dump perfectly good fish and the use of scientific advice based on erroneous data are two examples of practices that seriously undermine the department's credibility and industry support.

5. Equitable Distribution

The management regime must provide mechanisms to ensure that access to the resources is shared equitably among existing participants and that provision is made for new entrants when resource conditions warrant it. The current regime, highlighted by the race for quotas and an increasing tendency to compartmentalize the industry to achieve quota allocation objectives, is not providing an equitable distribution of resource biomass.

IV. Recommendations

Basic Principles

These recommendations are based upon the following fundamental principles:

- 1) protection of juvenile fish;
- 2) the maintenance of a year round fishery;
- 3) maximizing the return from the resource to the fishing industry.

Research and Development

1. A priority must be placed on research programs designed to locate and define sensitive aggregations and provide sound scientific advice on their protection.
2. Research into factors controlling recruitment and stock variability as well as stock interactions must be accelerated and supported.
3. More applied research is required to develop advice on optimum minimum sizes with priority placed on concurrent research into selective harvesting technology.
4. Priority must be given to the design of a data collection system that utilizes commercial fishing vessels thereby freeing up valuable research vessel time for less routine work.
5. Research into further applications of modern technology should be encouraged (e.g. use of acoustic sampling technology).

Resource Management

1. To reflect the commitment to fisheries management, the allocation process must be separated from the management process entirely. After all, the two are completely different, requiring totally different processes and personnel expertise. The allocation unit, along with the science branch and the economics and enforcement divisions must provide support to the management unit.
2. The consultative process must also be changed so that industry is given an opportunity to provide management advice outside of and prior to the allocation debate. The current process has eroded into a forum dominated by arguments and grandstanding by special interest groups who have had little or no input into the assessment process.

Recent initiatives by DFO Science in the form of regional seminars is a positive step but there needs to be a more formal mechanism including industry and Provincial representatives at an early stage in the development of research priorities.

This problem may be resolved automatically as we move away from quota management towards fisheries management.

3. The small elements of the inshore fleet, i.e. those who choose to become generalists, should be removed from quota management completely. Management and control of this group could be by way of a maximum carrying capacity and fixed annual trip limit along with appropriate area closures, gear limitations and minimum sizes.
4. There must be an immediate freeze on inactive licences or gear endorsements.
5. To provide protection to the depleted coastal spawning stocks, no fishing by otter trawl should be permitted within 12nm of the coast in the area east of Cape Sable Island until such time as these nearshore components are seen to recover and are properly assessed.
6. The effort of the specialist fleets must be controlled in addition to appropriate closures, size limits, and gear restrictions by an annual allocation of fishing weeks with a maximum CHP (cod, haddock, pollock combined) quota per week (25k for C-1 and 35k for C-2).
7. Amendments should be made to the Federal Fisheries Act to allow more management to be done by way of condition of licence. This is essential if the management regime is to be able to provide the flexibility necessary to manage fishing activities in a rational and reasonable way.

Enforcement

Many of the current enforcement problems will be eliminated once the incentives to violate have been reduced or removed, as herein proposed. Efforts must be made to increase the chances of getting caught and, once caught, the sanction must provide an effective deterrent. Some suggestions in this regard are as follows.

1. The criminal justice system is a totally ineffective and inappropriate way of enforcing a fisheries management regime. There are no other regulated industries (e.g. communications, utilities, transportation, hydrocarbon development, etc.) in this country that rely on the criminal justice system to the same degree as does fisheries.

DFO should immediately begin using the Ministerial powers of licence suspension under section 9 of the Federal Fisheries Act as a means of enforcing conditions of licence. This will meet with some industry objection but as many or more fishermen would welcome the move.

2. With increased use of fishing area restrictions as a management tool, work should begin immediately on the use of mandatory electronic positioning devices.
3. Work should begin immediately on a comprehensive analysis of ways in which enforcement of good management practices could be improved by cooperation with the Province at the plant/buyer/transportation end of the product flow.

APPENDIX I

Total management reform is obviously not achievable for 1990 but it is essential that these new management techniques be introduced as soon as possible. In order to effect the recommendations on groundfish management outlined and to achieve the objectives discussed, the following specific recommendations are made for 1990. Because of its discrete biological nature, Georges Bank could be used to introduce these initiatives. It is therefore suggested that for 1990, Georges Bank stocks be managed by use of input controls rather than output controls. These will allow the desired protection of juvenile fish, allowing them to spawn at least once before recruiting to the fishery. For Georges Bank we recommend the following:

- All draggers to use 140mm. square mesh trawls;
- All fish to be gutted, washed, bled and properly iced;
- Trips limited to 20,000 lb. C-1, 25,000 lb. C-2 landed weight;
- Observers to be carried at DFO request;
- No discards permitted;
- Minimum fish size of at least 19" be strictly enforced;
- All conditions to be as condition of licence;
- No gillnet fishing permitted.

For all areas, it is suggested that:

- Hook and line fishing be limited only by minimum hook size and number of hooks;
- Gillnets must be limited to the number the licensee can carry on any fishing trip;
- Gillnets must be tended at all times;
- Fishing with otter trawl of any size to be prohibited within 12nm. of the coast east of Cape Sable Island except under permit;
- Spawning areas must be closed during periods of concentrations of spawning fish;
- Areas in which there are aggregations of juvenile fish must be closed;
- A freeze must be placed on the activation or transfer of unutilized licences;
- Cancellation of otter trawl licences in favour of hook and Line licences should be encouraged;
- Fixed gear fishermen should be exempt from the current cubic number restriction on vessel replacement;
- Additional programming be instituted for the development of Canadian fisheries for underutilized species.

This revision of the groundfish management technique will result in the conservation of spawning stock biomass while enabling the fishery to take advantage of the natural fluctuations in recruitment.